**SLIDE 1: Introduction Slide**.

• **My Name:** Collins Munene Kariuki.

• **My Role:** Society of Physics Students (SPS) Program Engagement Summer Intern.

• **Advisor Name:** Dr. Alejandro de la Puente.

• **Co-advisor Name:** Rianna Ehrenreich.

**SLIDE 2: What is the Grand Scheme of Things?**

• **Overview of SPS:**

• SPS is a professional organization tailored for students and their advisers.

• Membership is open to anyone with an interest in physics, facilitated through collegiate chapters.

• Includes not just physics majors but also students in fields like astronomy, chemistry, computer science, engineering, geology, mathematics, medicine, and more.

• **Chapter-Based Operations:**

• SPS operates on a chapter basis, helping students evolve into active members of the professional community.

• Focuses on fostering additional competencies crucial for professional success that traditional coursework may not cover.

• **Skill Development:** Promotes engagement in research and outreach activities within the campus and local communities.

• **Support and Enrichment:**

• Dedicated to supporting every undergraduate student with an interest in physics and astronomy.

• Assists departments in helping their students succeed.

• Offers enriching opportunities at local, regional, national, and international levels.

• **MONITORING Chapter Involvement:**

• SPS monitors the involvement of its chapters to enhance engagement.

• Develops strategies to activate dormant or inactive chapters.

• Requests chapter reports to assess the health of its chapters across different zones in the US.

• **Purpose of Chapter Reports:**

• Gather contact information from active chapters.

• Understand chapter and society activities at the grassroots level.

• Recognize and reward chapters for their outstanding achievements.

* Collect information for inclusion in SPS publications.

**SLIDE 3: What Was I Tasked to Do?**

There are several key groups responsible for collecting and analyzing chapter reports, which will be discussed in the next section.

The SPS staff are responsible for:

* Organizing the collection of chapter reports, including communication with chapter members.
* Managing the collected data.
* Analyzing the data to update the YM database.
* Creating chapter activity reports to share with the council.

Chapter activity reports are documents that serve three main purposes:

* They are used to compile database updates for chapters in YM.
* They are used by the SPS Council in rating and reviewing chapter reports for Outstanding Chapter Awards.
* Chapter Activity reports are used by ZCs and AZCs when understanding what is going on in their chapter.

I joined during the Chapter Activity Reports period (Jun. 15th to Jul. 15th), where my tasks included:

* Creating chapter activity files for each zone.
* Creating folders for sharing with the SPS Council.

My primary objectives were:

* Review and process over 200 chapter report submissions from SPS chapters across the US, ensuring accurate and up-to-date records in zone-specific databases contributing to AIP’s ability to support and engage SPS chapters effectively
* Implement an automated system [using Python] to streamline the update process for chapter activity reports, incorporating fuzzy matching techniques to accurately match and update records from multiple Excel sheets, resulting in improved data accuracy and significant time savings.

**SLIDE 4: The Current State of Affairs.**

1. Access the Google Drive shared folder where we have the chapter report submissions from different school chapters.
2. Organize the submissions by Zone (thank you Rianna).
3. Backup and create a backup folder named after the previous year’s chapter activity reports.
4. Create a new folder for the current year’s chapter activity reports, e.g., ‘2024 Chapter Activity Reports’.

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1. Open a zone folder you want to work on.
2. UPDATE the information in the activity reports USING the chapter reports by CROSS-REFERENCING columns in the chapter reports with the corresponding columns in the activity reports. IN ADDITION TO…
3. UPDATE the information in the activity reports USING YM to get SPS information relevant to the chapter reports, e.g., to get the number of SPS chapters for that particular zone. IN ADDITION TO…
4. UPDATE the information in the activity reports by ACCESSING MHS for Sigma-Pi-Sigma information about specific chapters. IN ADDITION TO…
5. UPDATE the information in the activity reports by ACCESSING the M-Drive to update SPS chapter awards in the activity reports. Etc. etc.

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The way to do this now is manually which is a lot of work because it requires cross-referencing across multiple Excel files or databases, identifying the corresponding rows (chapter names) and columns (field names like ‘SPS Chapter-Advisor E-mail’), and updating them. You do this for each school.

{Include screenshot of Zone activity columns you’re supposed to update.}

{Include screenshot of Zone activity columns that act as the source from which you’ll update the activity reports.}

**SLIDE 5: What I Worked On!**

{Emphasize that you do this for over 200 schools, manually, which is quite time consuming.}

{Reference your Automate.py file and get a description of what you did there}.

{Mention that you did not get to complete the automation because there are some fields/columns like, ‘Department Chair Name’ where, manually, you had to look at each school’s website to see who the department chair is and automatically, you had to visit each department’s website to scrape the corresponding data. I didn’t have enough time to do this but instead first focused my efforts on updating the fields/columns which were easily and directly retrievable from the recent chapter report submission.}

**SLIDE 6: Where Do We Head Next?**

{Next year’s chapter report Google Form ask has to include hard-to-get information like Department Chair Name so that all such information is in one central location for easier retrieval}.

{Documentation of the standard operating procedure.}

{Documentation of the code I have written so far in a Jupyter Notebook which TeX notes for future interns to refer to. I might do this even in the next few days after the internship ends.}